

REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are respectfully requested.

I. Amendments to the Claims

Independent claims 37, 38, 58 and 59 have been amended to clarify features of the invention recited therein and to further distinguish the present invention from the references relied upon in the rejections discussed below.

II. 35 U.S.C. §§ 102 and 103 Rejections

Claims 37, 58 and 72 were rejected under 35 U.S.C. § 102(b) as being anticipated by Tominaga (U.S. 5,334,433). Claims 37, 38, 40, 41, 43-56, 58, 59, 61, 62 and 64-72 were rejected under 35 U.S.C. § 102(e) as being anticipated by Kojima (U.S. 2005/0019695). Further, claims 37, 38, 40, 41, 43-56, 58, 59, 61, 62 and 64-72 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kojima (U.S. 6,416,837) and Tominaga. These rejections are believed clearly inapplicable to amended independent claims 37, 38, 58 and 59 and the claims that depend therefrom for the following reasons.

Amended independent claim 37 recites an information recording medium including a recording layer and a dielectric layer, wherein the dielectric layer includes M1 (provided that M1 is at least one element selected from Sc, Gd, Dy and Yb), M2 (provided that M2 is at least one element selected from Zr, Hf and Si) and O, such that the dielectric layer is not comprised of S and is not comprised of F. Tominaga, Kojima '695, and Kojima '837 or any combination

thereof, fails to disclose or suggest the above-mentioned distinguishing features, as recited in independent claim 37.

Rather, Tominaga teaches a dielectric thin film 3 composed of La, Si, O and N, which is commonly known as LaSiON (see col. 3, lines 44-58).

Thus, in view of the above, it is clear that Tominaga requires the dielectric film to include LaSiON, but fails to disclose or suggest that the dielectric layer includes M1 (provided that M1 is at least one element selected from Sc, Gd, Dy and Yb), and M2 (provided that M2 is at least one element selected from Zr, Hf and Si), as recited in claim 37.

Now turning to Kojima '695, the Applicants note that, as acknowledged on page 3 of the Office Action, Kojima '695 teaches that a dielectric layer is comprised of an oxide including La_2O_3 , SiO_2 , Cr_2O_3 , HfO_2 , and ZrO , and teaches that the dielectric layer also includes $\text{ZrO}_{2.5}(\text{E})_{0.5}$, wherein "E" is either one of La_2O_3 , CeO_2 , Al_2O_3 , Ga_2O_3 , In_2O_3 , MgO , and Y_2O_3 (see Examples 3, 8 and 12 and Tables, as relied upon in the present rejection of claim 37).

Thus, in view of the above, it is evident that Kojima '695 requires the dielectric layer to include La, Si, Cr, Hf, Zr, and O, and at least one of Ce, Al, Ga, In, Mg and Y, but fails to disclose or suggest a dielectric layer that includes M1 (which is at least one element selected from Sc, Gd, Dy and Yb), M2 (which is at least one element selected from Zr, Hf and Si) and O, as required by claim 37.

Now turning to Kojima '837, Applicants note that, as acknowledged on page 3 of the Office Action, Kojima '837 teaches that the dielectric layer includes a mixture of oxides and sulfides (see col. 7, line 65 to col. 8, line 23). On the other hand, claim 37 recites that the dielectric layer is not comprised of S and is not comprised of F. In view of the above, the 35

U.S.C. §103(a) rejection suggests replacing the dielectric layer, as described in Kojima '837, with the structure of the dielectric layer of Tominaga.

However, as established above, Tominaga fails to disclose or suggest the structure of the dielectric layer as now required by amended claim 37. As a result, the combination of Kojima '837 and Tominaga fails to disclose or suggest the structure of the dielectric layer, as required by claim 37.

Furthermore, as briefly mentioned above, the 35 U.S.C. § 103(a) rejection suggests replacing the dielectric layer of Kojima '837 with the dielectric layer disclosed by Tominaga. However, this “replacement” of the dielectric layers is not proper because the recording material, which interfaces with the dielectric layer, used in Kojima '837 and Tominaga are completely different. Specifically, Kojima '837 describes using recording materials similar to the present invention, whereas Tominaga explicitly describes that the recording material is based on silver oxide or iron nitride (see col. 4, lines 15-24). Further, Tominaga describes that the selection of the dielectric layer depends on the materials included in the recording layer. As a result, it is apparent that the selection of the dielectric layer materials in Kojima '837 and Tominaga is not simply a design choice, but are rather based on the materials included in the recording layer. Therefore, it is respectfully submitted that a person of ordinary skill in the art would not simply be able to replace the dielectric layer of Kojima '837 with the dielectric layer of Tominaga, because the recording layer of Kojima '837 would be incompatible with the dielectric layer of Tominaga. Thus, this arbitrary replacement of the dielectric layers would have been discouraged and would not have been obvious in view of the disclosures of the Kojima '837 and Tominaga references.

Therefore, because of the above-mentioned distinctions it is believed clear that independent claim 37 and claims 40, 41, 43-57 that depend therefrom are not anticipated by Tominaga or Kojima '695 and that independent claim 37 and claims 40, 41, 43-57 that depend therefrom would not have been obvious or result from any combination of Tominaga and Kojima '837.

Furthermore, there is no disclosure or suggestion in Tominaga, Kojima '695, and/or Kojima '837 or elsewhere in the prior art of record which would have caused a person of ordinary skill in the art to modify to obtain the invention of independent claim 37. Accordingly, it is respectfully submitted that independent claim 37 and claims 40, 41, 43-57 that depend therefrom are clearly allowable over the prior art of record.

Amended independent claims 38, 58 and 59 are directed to an information recording medium, a method and a method, respectively and each recite features that correspond to the above-mentioned distinguishing features of independent claim 37. Thus, for the same reasons discussed above, it is respectfully submitted that independent claims 38, 58 and 59 and claims 61, 62 and 64-72 that depend therefrom are allowable over the prior art of record.

III. Provisional Double Patenting Rejection

Claims 37, 38, 40, 41, 43-56, 58, 59, 61, 62 and 64-72 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-73 of copending Application No. 10/895,870, which is published as Kojima '695.

In view of the above-described differences between independent claims 37, 38, 58 and 59 and Kojima '695, it is respectfully submitted that this double patenting rejection is no longer applicable. Specifically, claims 37, 38, 58 and 59 now recite limitations that are neither

disclosed nor suggested by Kojima '695. As a result, withdrawal of this rejection is respectfully requested.

IV. Conclusion

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance and an early notification thereof is earnestly requested. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

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